

**REMARKS/ARGUMENTS**

Applicant has received the Office Action dated August 29, 2003 in which the Examiner concluded that claims 3 and 23 would be allowable if rewritten in independent form, but rejected claims 1-2, 4-22, and 24-41 as anticipated by Fernandez et al. (U.S. Pat. No. 5,539,299). Applicant amends claims 16, 18, and 19. Based on the amendments and reasons stated herein, Applicant respectfully submits that claims 1-41 are patentable.

Fernandez teaches protecting a device associated with a battery from excessive voltages produced by a charger when the battery is being recharged. Specifically, Fig. 1 of Fernandez shows a battery pack 10 protecting an associated device 14 from excessive voltage by limiting the current flowing through transistor 55 in the direction marked by arrow 52. The current flowing in the direction marked by arrow 54 flows through the transistor's "inherent" diode 58 and around the transistor 55, allowing the current to flow regardless of the state of transistor. See col. 3, lines 23-41. However, as explained below, Fernandez does not teach or suggest all of the limitations of claims 1-41.

Applicant traverses the rejection of claim 1 for several reasons. First, Fernandez fails to teach or suggest a transistor coupled to a cell that "limits the current that can flow through said cell when the voltage across said cell falls to a predetermined minimum level." By contrast, Fernandez teaches a transistor that limits the current that can flow through a battery-powered device coupled to a cell, thus protecting the device. Fernandez does not even suggest "a cell protection circuit" as specified in claim 1. Claim 1 is directed to protecting the cell, whereas Fernandez is directed to protecting a battery-powered device from excessive recharge voltage.

At least for these reasons, claim 1 and its dependent claims 2-15 are allowable over Fernandez. Because independent claim 1 is patentable, Applicant has opted not to amend objected to claim 3 into independent form.

As amended, claim 16 requires, among other things, “a means for bypassing current around said cell when the voltage across said cell reaches the predetermined threshold.” Fernandez does not teach or even suggest bypassing current around a cell. At most, Fernandez teaches bypassing current around a transistor connected in series with a cell. See Fig. 1 and col. 3, lines 23-41. At least for these reasons, claim 16 and dependent claim 17 are allowable over Fernandez.

As amended, claim 18 requires “permitting current to conduct through a bypass device coupled in parallel with said cell” when “the voltage across said cell falls to a minimum predetermined level.” Fernandez does not teach or suggest these limitations. Specifically, Fig. 1 of Fernandez shows that bypass device 58 and any of a plurality of cells 16 are not in parallel, whereas claim 18 requires the bypass device and the cell to be in parallel. Further, Fernandez is directed to protecting a battery-powered device, whereas claim 18 is directed to protecting a cell. At least for these reasons, claim 18 and dependent claims 19-20 are allowable over Fernandez. Applicants also amended claims 18 and 19 to remove references to the labels “(a)” and “(b)” so as not to imply any particular order to the limitations.

Claim 21 requires “a separate protection unit coupled to each cell, each protecting unit protecting its associated cell.” Fernandez does not teach or suggest this limitation. Specifically, Fernandez teaches protecting a battery-powered device. Fernandez does not teach or suggest a


separate protection unit coupled to each cell, or even protecting cells in general. At least for these reasons, claim 21 and dependent claims 22-35 are allowable over Fernandez. Because independent claim 21 is patentable, Applicant has opted not to amend objected to claim 23 into independent form.

Claim 36 requires "a battery cell protection circuit" comprising "a current limiter," wherein a bypass device is coupled in parallel with the cell and the current limiter. Fernandez teaches protecting a battery-powered device, whereas claim 36 requires protecting a battery cell. Figure 1 of Fernandez does not show that bypass device 58 is in parallel with both the current limiter 47 and any of the plurality of cells 16, as required by claim 36. In fact, the bypass device 58 is described as being a diode that "inherent" to the transistor 55. Further, in the Office Action, the Examiner concluded that the primary reason for allowing claims 3 and 23 "is the feature of a cell protection circuit having a transistor connected in series with a current bypass device that is connected in parallel to a serially connected transistor and cell." This same reasoning should apply to claim 36. Further still, claim 36 requires the current limiter to limit current to the cell "when the cell voltage reaches a predetermined threshold." Fernandez does not teach or suggest these limitations. For any or all of these reasons, claim 36 and dependent claims 37-41 are allowable over Fernandez.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Conley Rose Deposit Account Number 03-2769 and enter any time extension(s) necessary to prevent this case from being abandoned.

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Respectfully submitted,



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